Typical Shear Strip Installation

Shear strips are installed within a structure or drill hole to monitor ground movements or structural movements along a shear plane. Shear strips consist of the following components:

- **Strip.** The shear strip is a board with two flat, parallel copper conductors connected together by resistors soldered at set intervals. (See Figure IV-30.) The conductors are brittle, so movement causes them to break.

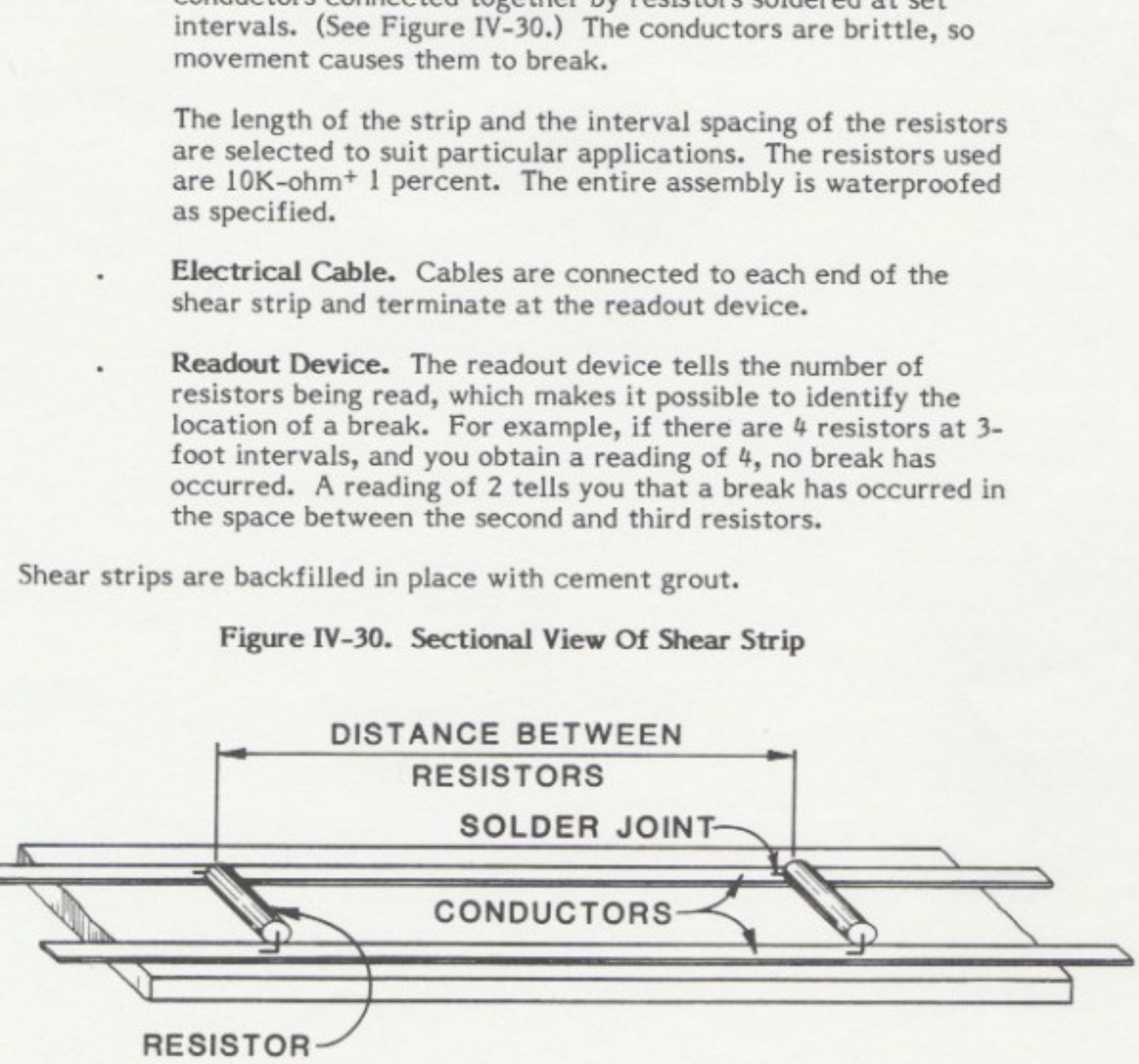
  The length of the strip and the interval spacing of the resistors are selected to suit particular applications. The resistors used are 10K-ohm^{+} 1 percent. The entire assembly is waterproofed as specified.

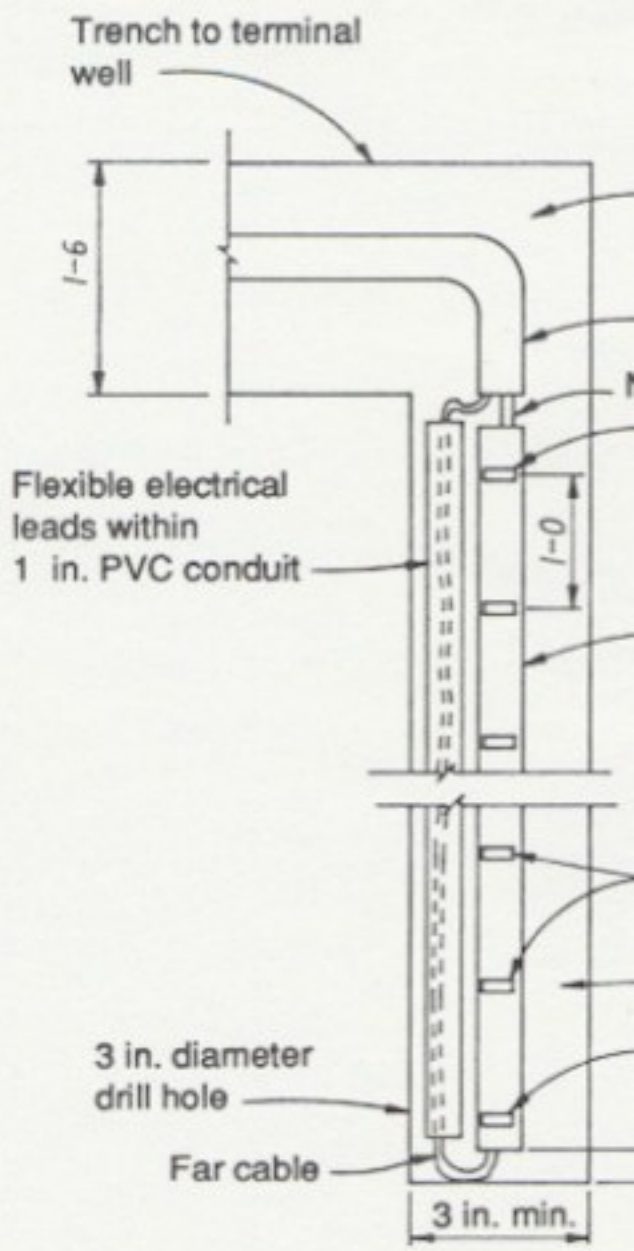
- **Electrical Cable.** Cables are connected to each end of the shear strip and terminate at the readout device.

- **Readout Device.** The readout device tells the number of resistors being read, which makes it possible to identify the location of a break. For example, if there are 4 resistors at 3-foot intervals, and you obtain a reading of 4, no break has occurred. A reading of 2 tells you that a break has occurred in the space between the second and third resistors.

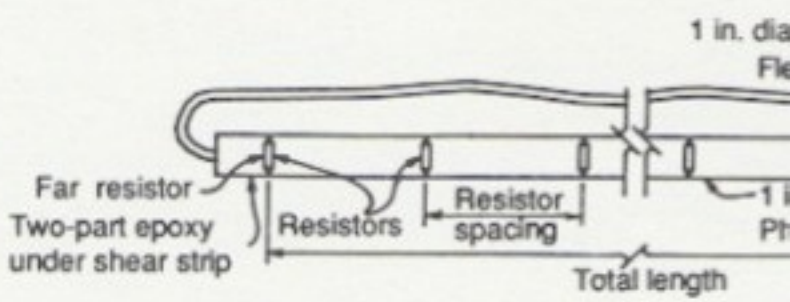
Shear strips are backfilled in place with cement grout.

Figure IV-30. Sectional View Of Shear Strip





a. Installation in Drill



b. Installation Against